

REMARKS

In response to the non final Office Action mailed 7 August 2003, the present application has been carefully reviewed and amended. Entry of the present amendment and reconsideration of the application is respectfully requested.

Rejections Under 35 USC §§102/103

Claims 2-5, 9-13 and 18-42 stand rejected under 35 USC §102 as anticipated by, or in the alternative, under 35 USC §103 as obvious over Alt (' 234).

Claim 9

As amended, independent Claim 9 recites in part "one of a local heat source and local heat sink affixed to the catheter body".

Alt discloses a thermodilution method for determining cardiac output. That is, Alt requires the introduction of a thermodilution indicator from outside the system. There is no disclosure or suggestion in Alt of employing a local heat source or heat sink affixed to the catheter body (inside the system). The absence of at least this limitation precludes Alt from sustaining the asserted rejection under §102 or §103.

As Claims 10 through 14 depend from Claim 9 and include the limitations thereof, these claims are also in condition for allowance.

Claim 15

As amended, independent Claim 15 recites in part "a controller connected to the dilution indicator source and the sensor for calculating the blood flow in response to the signal from the sensor".

The dilution indicator source in Alt is a manually actuated syringe. There is no disclosure or suggestion of connecting the syringe to the controller. Alt does not disclose or

contemplate the use of a dilution indicator source connected to the controller. In fact, Alt specifically contemplates a manual injection.

volume is determined. Also this provides a time scale and evidence of the injection rate and start time to assure that the analysis is proper when the cryogen impulse is manually released. This can supplement or re- [Col. 8, lines 39-42]

As the recited controller and dilution indicator source connection is contrary to Alt, applicant respectfully submits Claim 15 is in condition for allowance. Claim 38 depends from Claim 15 and includes all the limitations thereof, Claim 38 is also in condition for allowance.

Claim 16

As amended, independent Claim 16 recites in part "determining at a controller connected to the indicator source and the sensor a change in blood flow...".

Alt does not disclose or even contemplate the connection of a controller to an indicator source. In fact, Alt specifically relies upon a measured temperature gradient to provide evidence of injection rate. In contrast, Claim 16 recites the interconnection of the controller, and the indicator source and the sensor. Therefore, Claim 16 as believed to be in condition for allowance.

As Claims 17, 18, 39 and 40 depend from Claim 16 and include all the limitations thereof, these claims are also in condition for allowance.

Claim 19

As amended, independent Claim 19 recites in part "calculating the blood flow in a controller operably connected to the indicator source and the downstream sensor".

Alt does not disclose or even contemplate the connection of a controller to an indicator source. In fact, Alt specifically relies upon a measured temperature gradient to provide evidence of injection rate. In contrast, Claim 19 recites the interconnection of the controller, and the indicator source and the sensor. Therefore, Claim 19 as believed to be in condition for

allowance. As Claim 41 depends from Claim 19 and include the limitations thereof, Claim 41 as believed to be in condition for allowance.

Claim 22

Amended, independent Claim 22 recites in part "a temperature gradient generator on the catheter".

Alt is a thermodilution catheter which expressly employs a manually introduced cryogen. There is no disclosure, or suggestion of employing a temperature gradient generator on the catheter. Alternatively, Alt contemplates employing a pressure gradient P for determining the blood pressure.

Therefore, Claim 22 is in condition for allowance. As Claims 23 and 24 depend from Claim 22 and include all limitations thereof, these claims are also in condition for allowance.

Claim 25

Amended, independent Claim 25 recites in part "locating the blood parameter altering section connected to a rate and volume measured indicator source".

As Alt employs a resulting dilution curve to identify an injection rate and start time, the recited indicator source having a measured rate and volume is expressly contrary to the disclosure of Alt. Therefore, applicant respectfully submits Claim 25 is in condition for allowance.

As Claims 26-29 and 42 depend from Claim 25 and include all limitations thereof, these claims are also believed to be in condition for allowance.

Claim 34

Amended, independent Claim 34 recites in part "an elongate catheter having a stenosis reducing member, a local temperature gradient generator".

Alt is expressly and repeatedly is directed to a thermodilution catheter, there can be no disclosure or suggestion of employing the recited local temperature gradient generator on the catheter. Therefore, Claim 34 is in condition for allowance.

As Claims 30, 31 and 36 depend from Claim 34 and include all the limitations thereof, these claims are also in condition for allowance.

Claim 35

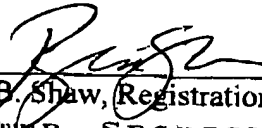
Amended, independent Claim 35 recites in part "an indicator source connected to the catheter for providing a known rate and volume of dilution indicator to the indicator introduction port".

Alt does not disclose or suggest an indicator source connected to the catheter, nor an indicator source for providing a known rate and volume of dilution indicator to the indicator introduction port. In contrast, Alt employs in vivo measurements of a manually introduced cryogen to determine the rate and volume of indicator (cryogen).

Therefore, Claim 35 is in condition for allowance. Claim 37 depends from Claim 35 and includes the limitations thereof and is also in condition for allowance.

Therefore, applicant respectfully submits all the pending claims, Claims 2-6, 9-19 and 22-42 are in condition for allowance and such action is earnestly solicited. If, however, Examiner Szmaj feels that any further issues remain, he is cordially invited to call the undersigned so that such matters can be promptly resolved.

Respectfully submitted,



Brian B. Shaw, Registration No. 33,782
HARTER, SECREST & EMERY LLP
1600 Bausch & Lomb Place
Rochester, New York 14604

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